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Estimating the "MARKET VALUE" of a MILK DISTRIBUTING BUSINESS

BY DONALD E. HIRSCH

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The Farmer Cooperative Service conducts research studies and service activities of assistance to farmers in connection with cooperatives engaged in marketing farm products, purchasing farm supplies, and supplying business services. The work of the Service relates to problems of management, organization, policies, financing, merchandising, quality, costs, efficiency, and membership.

The Service publishes the results of such studies; confers and advises with officials of farmers' cooperatives; and works with educational agencies, cooperatives, and others in the dissemination of information relating to cooperative principles and practices.

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SUMMARY

Milk distributing cooperatives live in changing market environments. The current trend is toward fewer but larger organizations. Small businesses -- whether cooperative or not -- find survival increasingly difficult as market supply and distribution areas continue to expand.

Sales and mergers have reduced the number of fluid milk distributors, and will continue to do so in the future. The very large organizations involved in some of these transactions have sufficient experience to make reasonable estimates of the market values of their competitors' businesses, but most small organizations have not.

The primary purpose of this report is to provide managements of small cooperative enterprises, contemplating the sale or purchase of milk distributing businesses, with information that will assist them in arriving at intelligent decisions about market values. Such information is needed whether the prospective buyer or seller is a cooperative or not. Also it is as essential in a cooperative merger as in an outright purchase or sale involving only cooperatives.

The assets of a "going concern" engaged in milk distribution may be classified as tangible and intangible. In general accounting terminology, "goodwill" is only one of several intangible assets. In the dairy industry, other intangibles are likely to be of small value and therefore "goodwill" usually is interpreted to include all intangible assets.

The recommended procedure for estimating the current value of fixed assets -- the principal tangible assets -- is to determine the cost of replacement, and then subtract an allowance for depreciation based on the age of present equipment and facilities. This is subject to some adjustment but still is far less difficult than the problem of estimating goodwill.

Three complementary formulas developed for use in appraising goodwill are presented in this report. They provide some measure of (1) the past profitability of the business, (2) its probable future profitability, and (3) the physical volume of products handled. They are logical compromises or adaptations of procedures currently used by administrative employees in the industry or by professional accountants. They are not presented as infallible methods to obtain easy answers to market valuation problems. Instead, they are intended as guides reflecting the experience of many persons. Undoubtedly the formulas could be improved if further research were conducted to analyze and appraise all related factors. However, they permit a more realistic and comprehensive method of appraising goodwill than has been available to most segments of the industry.

The formulas result in a "basic value" for goodwill. This basic value is affected by many factors which cause a buyer or a seller to adjust it either upward or downward. Some of these factors may be grouped

under operating efficiency, marketing environment, human relations, and special legal privileges.

Addition of the adjusted values for tangible assets and goodwill provides the final estimate of market value. The sale price is the same as market value only when all pertinent information has been available and accurate evaluations of that information have been made by both buyer and seller. Sometimes, due to lack of information or errors in judgment on the part of a buyer or seller, the sale price may be either higher or lower than the actual market value. However, such sale prices usually are the best indicators of current market values of milk distributing businesses serving any given area.

It is hoped that this publication will assist cooperative managements in developing sound estimates of the market values of the milk distributing businesses which they may buy or sell in the years ahead.

ESTIMATING THE "MARKET VALUE" OF A MILK DISTRIBUTING BUSINESS

By

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There is a definite trend toward fewer and larger milk distributing businesses in this country. While market supply areas continue to increase in size rather steadily, distribution areas are expanding rapidly.

These developments have resulted in a tremendous change in the marketing environments of most milk distributing organizations. Some rather inefficient concerns, able to operate successfully in the past, must now either increase efficiency, effect major operating changes, or go out of business. An ever-increasing number of small organizations are discontinuing their bottling operations to specialize in the distribution of products packaged by large businesses. These in turn may serve specialized distributing concerns in cities other than the city where its processing plant is located.

The managements of many existing cooperative and noncooperative organizations soon will need to decide whether to purchase other milk distributing businesses or to sell their own. It is the purpose of this report to assist the managements of farmers' cooperatives to make such decisions wisely. While the report emphasizes market values of milk distributing businesses, much of its information is also adaptable to dairy manufacturing enterprises. Furthermore, much of the discussion here will be useful to managements of all small dairy businesses -- noncooperative organizations as well as cooperatives.

Managements of dairy businesses know that the market value of a "going concern" is greater than the combined value of its physical assets. In order to determine the market value of a going business, one must evaluate both the tangible and intangible assets. "Assets" are what an organization owns and "total assets" equal the total value of its physical resources plus certain intangibles. The term "intangible assets" -- which is discussed at some length later in this report -- includes such things as attitudes, reputation, patents, and business connections. Ordinarily in the dairy industry the terms "intangible assets" and "goodwill" mean the same.

Tangible assets consist of money, buildings, equipment, -- in fact, all or most of the items appearing on a balance sheet. Appraising them is a difficult job, requiring skill and experience. Ordinarily, however, a specialist can be hired to do this job. But only management can appraise the intangible assets of any business it contemplates buying or selling. Since evaluation of intangible assets usually receives less attention than it deserves, the major part of this report is devoted to developing a sound procedure for arriving at such values.

Occasions calling for the evaluation of both tangible and intangible assets arise when (1) a cooperative merges with one or more associations; (2) a cooperative buys out another business; (3) a cooperative sells its business. At these times the managements of the businesses in question determine the sale price by bargaining, based on the judgments of the individuals concerned.

The sale is the same as market value only when all pertinent information has been made available and when both buyer and seller accurately evaluate that information. Sometimes, due to lack of information or errors in judgment on the part of a buyer or seller, the sale price may be either higher or lower than the actual market value. However, such sale prices usually are the best indicators of current market values of milk distributing businesses serving any given area.

If the negotiating management represents a large cooperative, that management likely will be experienced enough to form sound judgment. But the management of a small or medium-sized association, without experience to guide it, will be at a disadvantage in bargaining. Both need to obtain the counsel of legal or tax experts and may require the services of accountants familiar with cooperative enterprises. However, the final price still depends upon the judgments of the negotiators.

NATURE OF COMMERCIAL GOODWILL

There are about as many concepts of goodwill as there are methods of measuring it. Goodwill has been variously defined as follows:

1. The established popularity of a business organization.

2. The value of an established business over and above its material property, that is, assets such as reputation, patents, franchises, trademarks or trade secrets.

3. The value of "custom" -- patronage of regular customers -- that is in addition to the value of the products or services it sells.

4. The difference between the asking price and the appraised value of the land, buildings, equipment and other assets.

5. The amount of a business concern's past earning power in excess of a "normal" rate of return on (a) the amount of its tangible assets, or (b) the capital investment in the business.

6. The difference between anticipated profits and a "reasonable" rate of profit on the capital invested.

There are other definitions but they are variations of the above and not significantly different.

In the strict sense of the word, goodwill relates only to the attitudes of customers, employees, producers, credit institutions and the general public in their dealings with the organization. When these attitudes are distinctly favorable, and continue for extended periods, they have economic significance. Perhaps the attitudes of present and potential customers are most important but the attitudes of others may also have a direct bearing on efficiency, stability, or chances for expansion of a business.

Persons in the dairy industry customarily use the word goodwill to include not only attitudes but also other intangible assets. These may be:

1. Reputation.
2. Custom (habitual patronage of regular customers).
3. Individuality.
4. Location (other than that accounted for in the appraised land valuation).
5. Patents, copyrights, franchises, trademarks, trade names, and -- if these exist -- trade secrets.
6. The right to benefit from current contracts and leases.

While these other intangible assets are significant, goodwill resulting from favorable attitudes usually is by far the most important in milk distribution. It is convenient, however, to use the term goodwill to include all intangible assets.

It is apparent that goodwill arises from the work of management and others concerned with a business. This work may be evidenced in part by such things as patents but generally it concerns the field of human relations. Incidentally, this is an untilled field for many dairy cooperatives. They could cultivate it to great advantage, harvesting the respect and confidence of members, employees, and the general public.

Let us emphasize that goodwill is an asset only when it can be transferred. For example, the ability and popularity of a general manager or key sales employee is not an asset if he will not remain after the transfer of ownership.

Certain operating costs are related to goodwill even though not visible on the balance sheet. Long-term goodwill may result from expenditures for advertising, or from money spent on employee programs, membership relations programs and research.

CURRENT METHODS OF EVALUATING GOODWILL

Prior to the preparation of this report, a survey was made to determine current methods of evaluating goodwill.[1] A review of accounting textbooks and correspondence with skilled accountants indicated that the accounting profession measures goodwill in terms of profits. It stresses profits in excess of those calculated to represent a "normal" return on the investment. The concept of a "normal" return will be illustrated later in the discussion of specific procedures. The extent or rate by which a business can make a profit may be measured in ways other than "normal" return on investment. These various concepts are grouped under the term "profitability."

The accountants' methods differ widely from those of administrative employees in the industry. For the most part, milk distributors limit their measurements to sales volume, that is, to units of product, or numbers of routes, or numbers of route customers.

The administrative employees' methods of appraising market values on the basis of certain rates per unit of business reflect the same interest in profits as accounting formulas. However, accountants require relatively complete information on investments and profits whereas the administrators' method is more readily adaptable to purchases of portions of a business. Data on a route basis often are not available to permit logical use of the accountants' profit measuring approach.

Industry is probably more reluctant to release profit and loss data than any other kind of business information. It is more likely to release volume data than any other kind. These conditions no doubt prompted administrators in the industry to develop an approach which, on the surface, appears to differ radically from that used by accountants.

PRINCIPAL METHODS AND VARIATIONS

The survey for this report disclosed 19 procedures for determining goodwill. A more extensive survey undoubtedly would uncover a greater number of procedures. However, the four basic methods reported here are those in most common use. These methods concern the following:

1. Profitability and return on investment.
2. Volume of product sales on routes.
3. Routes as individual operations.
4. Number of route customers.

Profitability and Return on Investment

Eleven variations of the method of estimating goodwill in terms of profitability and return on investment were disclosed during the course of this study. Some of the most complex accounting techniques are little used in the dairy industry, at lease with regard to purchase or sale of any businesses other than the very large.

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[1] However, most of the basic information was compiled during a period of years for advisory studies of the management problems of individual milk distributing cooperatives.

Variation One

Average net profits for the preceding 5 years multiplied by 3. (This method assumes that profits for a 3-year period reflect goodwill but has a 5-year base in order to help compensate for any trend.)

Variation Two

Sum of the net profits for the preceding 3 years. (Similar to variation one but with greater emphasis on profit-making and less allowance for trend.)

Variation Three

Sum of the net profits for the first 3 years following the change in ownership. (This may be an estimate of future profits, or the payment for goodwill may be delayed until the actual profit record for the 3-year period is known.)

Variation Four

Net profit for the one year immediately preceding.

Variation Five

(1) Determine the average net profits for the last 3 years; (2) determine the average capital investment (net worth) in the business during the 3 years; (3) calculate the investment return on capital on a 5 percent interest basis; (4) subtract the investment return figure from the average net profit figure; (5) multiply the remainder by 5.

Variation Six

(1) Determine the average net earnings (or profits) for the past 5 years; (2) multiply that amount by 10 (to project earnings for a 10-year period); (3) subtract from the product the amount of the total value of all tangible assets. (Thus assuming that the balance indicates the value of intangible assets, as determined by earnings.)

Variation Seven

Annual average earnings (or profits) for the preceding 5 years multiplied by 2. (Similar to variation one.)

Variation Eight

(1) Determine average net profits for the past 5 years; (2) determine the average capital investment in the business during the 5 years;

(3) calculate the return on the capital investment if 5 percent interest were realized; (4) subtract the investment return figure from the average net profit figure; (5) multiply the remainder by 3. (Thus goodwill will be equal to the profits in 3 years in excess of a "normal" rate of return on investment.)

Variation Nine

(1) Determine average net profits for the past 5 years; (2) determine the average capital investment in the business during the 5 years; (3) calculate the return on the capital investment if 5 percent interest were realized; (4) subtract the investment return figure from the average net profit figure; (5) capitalize at 10 percent the income in excess of a 5 percent interest return by dividing by .10 the remainder derived from step four. (Basically similar to variation eight.)

Variation Ten

(1) Determine average net profits for the past 10 years; (2) determine the current net worth; (3) calculate the return on the amount of the net worth if 7 percent interest were realized; (4) subtract the interest amount from the average net profit figure; (5) multiply the remainder by four. (Thus goodwill will be equal to the profits for four years in excess of a "normal" rate of return on investment.)

Variation Eleven

(1) Determine the current appraised value of all tangible assets (for most dairy businesses, this includes total assets; a few concerns have small allowances for intangible items such as initial organizational expense); (2) estimate the future average appraisal value of all tangible assets for the next five-year period; (3) calculate the annual average return on the future tangible assets if 7 percent interest were realized; (4) determine annual average net sales and profits during the last 5 years; (5) estimate annual average profits for the next 5 years; (6) subtract the figure from step three from that from step five; (7) multiply the remainder by five.

Volume of Product Sales on Routes

During the course of the study, six major variations were discovered of the basic method of estimating goodwill in terms of volume of product sales on routes.

Variation One

1. Price range:

    (1) Retail: $8 - $10 per point.

    (2) Wholesale: $4 - $5.

2. Most likely price:

   (1) Retail: $10 per point.

   (2) Wholesale: $5 per point.

3. Number of points (retail and wholesale):

   1 point for each quart of milk.
   1 point for each 1/2 pint of heavy cream (36-40 percent).
   1 point for each quantity of light and medium cream (wholesale sales only) equivalent in butterfat content to 1/2 pint of heavy cream.

4. Period of point determination:

   Average daily sales with:

   (1) Prices per point paid only for business still on books 60 days after change in ownership

   (2) Waiting period reduced to 30 days and prices per point reduced about 20 percent.

Variation Two

1. Price range (retail and wholesale):

   $6 - $10 per unit

2. Most likely price (retail and wholesale):

   $7.50 per unit

3. Number of units:

   (1) Retail: 1 unit for each quart of milk
   1 unit for each 1/2 pint of cream

   (2) Wholesale: 1 unit for every 3 quarts of milk
   1 unit for each 1/2 pint of cream

4. Period of point determination:

   Daily average sales for one selected week prior to purchase.

Variation Three

1. Price range (retail and wholesale):

   $10 - $15 per point (up to $20 per point in some smaller markets)

2. Most likely price:

   $12 per point

3. Number of points:

(1) Retail:

1 point for each unit (a unit may be a quart, pint, third, or half pint) of plain or chocolate milk.
1 point for each quart of buttermilk.
4 points for each quart of cream (heavy, light, sour).
2 points for each pint of cream (heavy, light, sour).
1 point for each half pint of cream (heavy, light, sour).
1 point for each unit (10 lb. pkg., 5 lb. pkg., 2 lb. pkg., 12 oz. pkg., or 8 oz. glass) of cottage cheese.
1 point for each pound of butter.
1 point for each unit (quarts, pints, half pints) of orange drink.
1 point for each quart of special dairy drinks.
1 point for each dozen of eggs.

(2) Wholesale:

1/4 point for each quart of plain or chocolate milk in bulk containers.
1/3 point for each bottled unit of plain or chocolate milk in quarts, pints, or thirds.
1/4 point for each bottled half pint of plain or chocolate milk.
1/4 point for each quart of buttermilk in bulk containers.
1/3 point for each quart of bottled buttermilk.
1/4 point for each quart of cream (heavy, light, sour) in bulk containers.
1 point for each quart of bottled cream (heavy, light, sour).
1/2 point for each pint of bottled cream (heavy, light, sour).
1/4 point for each half pint of bottled cream (heavy, light, sour).
1/3 point for each pound of cheese in 5 lb. or larger containers.
1 point for each pound of cheese in 12 oz. or 2 lb. containers.
1 point for each pound of butter sold to employees.
1/3 point for each pound of butter sold to regular wholesale buyers.
1/3 point for each unit of orange drink in quarts or pints.
1/4 point for each half pint of orange drink.
1/3 point for each container of special dairy drinks.
1 point for each dozen of eggs sold to employees.
1/3 point for each dozen of eggs sold to regular wholesale buyers.

4. Period of point determination:

Daily average for several months prior to purchase; selected months may be chosen from different seasons of the year.

Variation Four

1. Price range:

    (1) Retail: $4 - $5 per point

    (2) Wholesale: $3 - $4 per point

2. Most likely price:

    (1) Retail: $4.50 per point

    (2) Wholesale: $3.00 per point

3. Number of points (retail and wholesale):

    1 point for each quart of milk.
    1 point for each half pint of cream.
    1 point for each pound of butter.
    1 point for each package of cottage cheese.

4. Period of point determination:

    Daily average, recent period prior to purchase of business. For purchase of individual route, total points for two consecutive days because of every-other-day delivery.

Variation Five

1. Price range:

    (1) Retail: $4 - $8 per point

    (2) Wholesale: $2 - $4 per point

2. Most likely price:

    (1) Retail: $6 per point

    (2) Wholesale: $3 per point

3. Number of points (retail and wholesale):

    1 point for each quart of plain, chocolate or skim milk or buttermilk.
    1 point for each half pint of cream.

4. Period of point determination:

    Daily average sales for a designated period prior to purchase.

Variation Six

1. Price range:

    (1) Retail: $4 - $10

    (2) Wholesale: $2 - $5

2. Most likely price:

    (1) Retail: $10 if only a few routes involved.
    $6 if entire business changes hands.

    (2) Wholesale: $5 if only a few routes involved.
    $3 if entire business changes hands.

3. Number of points (retail and wholesale):

    1 point for each quart of milk.
    1 point for each half pint of cream.
    1 point for each pound of cottage cheese.
    1 point for each pound of butter.
    1 point for each dozen of eggs.

4. Period of point determination:

    Daily average sales calculated by dividing total sales for one month by 25. (Using 25 instead of 30 or 31 in order to reflect the pattern of deliveries.)

Routes as Individual Operations

Only one example is used here involving blanket estimates of the goodwill values of individual wholesale and retail distribution routes. However, it is common practice in the industry to make estimates on this basis.

1. Price range (retail and wholesale):

    $700 - $10,000 per route (This tremendous range reflects great differences in size and profitability of routes.)

2. Most likely price:

    $2,500

Number of Route Customers

One of the organizations contacted sometimes uses a method involving the number of customers served. That method functions as follows:

1. Most likely price:

    (1) Retail: $5 per customer.

    (2) Wholesale: $10 per customer stop for most stops but more for a few large volume stops.

2. Definition of customer:

   Buyer who purchased at least 8 points per month, according to following schedule:

   1 point for each quart of plain, chocolate, or skim milk or buttermilk.
   1 point for each half pint of cream.

3. Period of point determination:

   Daily average sales of customers still patronizing the business 60 days after change in ownership.

ILLUSTRATIONS OF THEIR APPLICATION

To make these methods and their variations meaningful, let us illustrate their application. A model or hypothetical business was constructed from data obtained from a number of cooperatives with its pattern of operations drawn from one particular organization.

The following information was tabulated for the hypothetical business:

1. For each wholesale and each retail route: Daily average number of units of product, by kind of product and type and size of container.[2]

2. For each wholesale and each retail route: Daily average selling price for each unit of product.

3. For each wholesale and each retail route: Daily average sales in dollars.

4. Annual sales volumes and net margins (profits or savings), by years, for last 5 years.[3]

5. The average net margin for the 10-year period, 1944-53.

6. Total assets (book value) at the end of 1953.[4]

7. The current appraised value of all tangible assets.

8. Estimated future average appraisal value of all tangible assets during the next five years.

9. Estimated future annual average profits (or savings) during the next five years.

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[2] This information is summarized in table 4 on page 19 of this report.
[3] This information is summarized in table 3 on page 18 of this report.
[4] This information is summarized in table 2 on page 18 of this report.

The details for these tabulations are not given here since the primary purpose of this section of the report is merely to illustrate the operation of various methods of calculating goodwill. The information necessary for application of recommended procedures is given in a subsequent section of this report.

Profitability and Return on Investment

Accountants are nearly unanimous in selecting "profitability and return on investment" as a method of evaluating goodwill. However, there certainly is no complete uniformity in the interpretation of that method, as the 11 variations previously given indicate.

One of the decisions a cooperative must make is how it will define the term "net profits." A cooperative with a mandatory obligation to return to its producer-patrons in cash or credit all operating savings need not pay a Federal income tax. On the other hand, unless it is a partnership, a proprietary organization similar in volume and efficiency will usually pay such a tax. The proprietary organization, of course, can adopt the provision allowing it to return all savings to producers. But customarily it does not choose to do so. Thus a cooperative or partnership, having the identical margin before taxes as its noncooperative corporation counterpart, might have a larger margin after taxes.[5] This is a factor in evaluating goodwill. It is assumed, however, that an association contemplating the purchase of a business ordinarily will calculate the margin of that business according to the tax liabilities of its own type of organization.

Another rather confusing term is "capital investment". Apparently it means different things to various persons and even may have different meanings when used by a single person in separate contexts. For use in this report, it means the net worth figure on the balance sheet. That figure indicates the amount of owner or proprietor capital.

In calculating returns on investments, consider the rate for which capital can be secured at present for this enterprise. Attention should be given to the preferred stock interest rate as well as the rate which local banks are likely to charge.

The customary length of time for compiling annual average profits (or margins), is a somewhat longer period for large businesses than small.

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[5] The producer-patrons of the cooperative, as well as the members of a partnership, would incur individual income tax liabilities in the same manner as the owners of a noncooperative corporation.

Using the procedures outlined earlier, we derive an astounding diversity in goodwill values for our hypothetical business. We emphasize here not the procedure but the great differences in dollar amounts from 11 goodwill estimates.

Variation	Amount of goodwill
1	$118,500
2	142,500
3	[6] 135,000
4	67,500
5	181,750
6	Zero
7	79,000
8	87,750
9	292,500
10	22,000
11	91,000

Thus the application of these 11 variations gives a wide range in goodwill values from zero to $292,500. If current information had been available on other methods sometimes used, the range might have been even greater.

Volume of Product Sales on Routes

Persons interviewed in the industry -- and these included representatives of noncooperative organizations as well as cooperatives -- were almost unanimous in their selection of the above named method for estimating goodwill values.

Variation three (sum of three years' profits after ownership change) was the only one in which bulk and packaged products, sold at wholesale, were distinguished from smaller, consumer-size packages. In other cases, points were calculated for quantities in bulk containers at the same rate per quart or other measure as for those in the smaller packages.

Using the data for our hypothetical business, the variations of this method produce the estimates given in Table 1.

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[6] This figure is not based entirely on historical data. It represents an estimate by management of profit conditions during the next 3 years. For illustrative purposes, it was assumed here that average profits during the 1954-56 period would equal the 1952 profits.

Table 1. - *Estimates of goodwill values for a hypothetical business organization, based on various procedures involving volume of product sales on routes*

Variation	Retail sales			Wholesale sales			Combined totals	
	Points	Value per point	Total value	Points	Value per point	Total value	Points	Value
1--------	4,150	$10.00	$41,500	8,960	$5.00	$44,800	13,110	$86,300
2--------	4,350	7.50	32,625	4,353	7.50	32,648	8,703	65,273
3--------	4,500	12.00	54,000	3,862	12.00	46,344	8,362	100,344
4--------	4,450	4.50	20,025	10,410	3.00	31,230	14,860	51,255
5--------	4,500	6.00	27,000	10,060	3.00	30,180	14,560	57,180
6--------	4,488	6.00	26,928	11,000	3.00	33,000	15,488	59,928

These six procedures result in estimated goodwill values ranging from $51,000 to $100,000. Four of the six fell within a more limited range of from $51,000 to $65,000, however.

These estimates were based on annual averages. The period chosen is important because seasonal changes in demand and supply, and changes in demand due to holidays and other special events, affect the point situation materially.

Contract business with schools or government hospitals or military posts usually is disregarded in the calculation of points. Such business may be valuable during the lifetime of the contract but lacks any degree of permanency. In some situations this is not the case, of course, but generally such business must be discounted.

Routes as Individual Operations

In our hypothetical business, the average routes were rather large as compared to the averages of most cooperatives. In this business, each item of product -- irrespective of kind, size, or type of package -- was counted as a unit. It was assumed that 10 retail routes had a daily average volume of 450 units. The comparable figure for 10 wholesale routes was 1,130 units.

Many associations handling an equal volume of product might have more than 20 routes.

Applying the method of evaluation of routes as individual operations, as given earlier, the goodwill for our hypothetical business would be $50,000.

Number of Route Customers

Using a special point system to define a customer (given previously in the discussion of the method concerning number of route customers) it was determined that the hypothetical business had 5,000 retail customers and 1,000 wholesale customers. With a value of $5 per retail customer and $10 per wholesale, goodwill then was estimated to be $35,000.

Comparison of Principal Methods

If the values given earlier are rounded-off to the nearest $1,000, the four principal methods of evaluation and their variations result in the following comparisons:

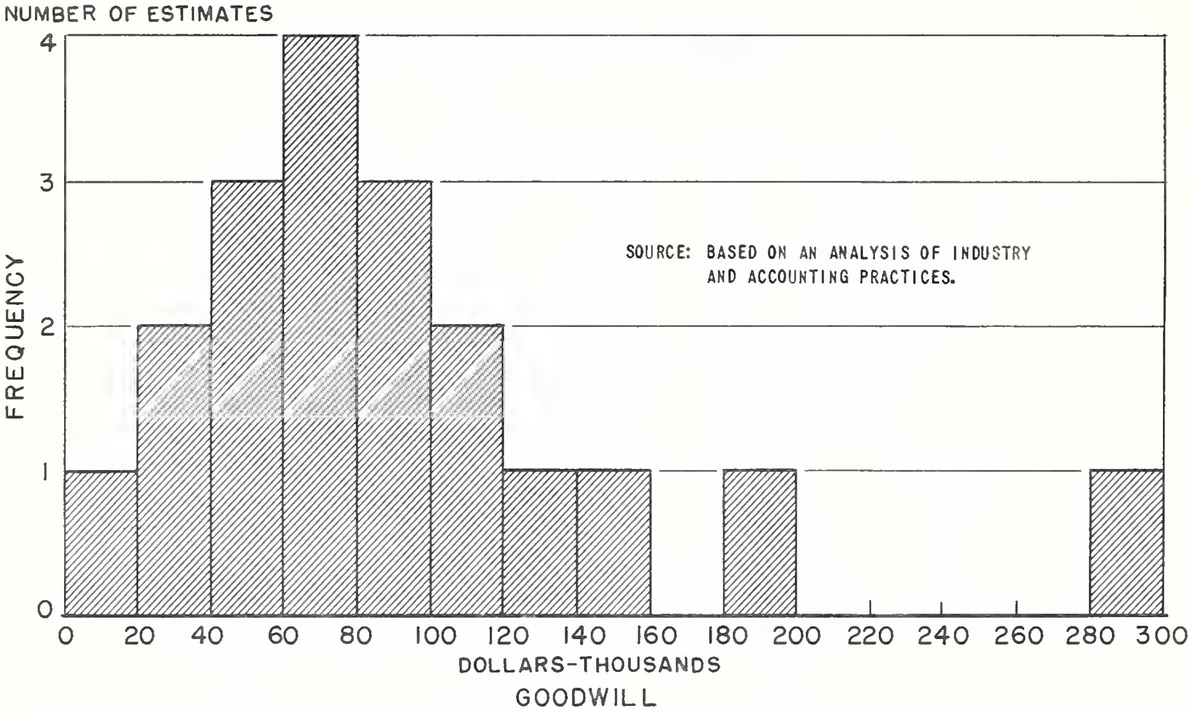
Variation	Method			
	Profitability and return on investment	Volume of product sales on routes	Routes as individual operations	Number of route customers
1	0	$51,000	$50,000	$35,000
2	$22,000	57,000		
3	68,000	60,000		
4	79,000	65,000		
5	88,000	86,000		
6	91,000	100,000		
7	118,000			
8	135,000			
9	142,000			
10	182,000			
11	292,000			

Ten of the above 19 values were between $40,000 and $100,000. Three-fourths were between $20,000 and $120,000.

Based on class intervals of $20,000, the largest number of estimates (four) were in the group of $60,000 to $80,000. Six estimates fell within lower size classes and nine within higher. When these data are combined and illustrated graphically, the results are as given in Figure 1.

Thus the various current procedures for evaluating goodwill result in a wide range of estimates. The estimate used in negotiating a purchase or sale is very important since it may represent a significant part of the sale price. By random selection of one of the methods discussed here, the buying or selling organization might have a very high or very low estimate of goodwill. This would not be a sound method of doing business.

FIGURE 1
FREQUENCY DISTRIBUTION OF 19 ESTIMATES OF THE GOODWILL VALUE FOR A HYPOTHETICAL MILK DISTRIBUTING BUSINESS



SOURCE: BASED ON AN ANALYSIS OF INDUSTRY AND ACCOUNTING PRACTICES.

CURRENT METHODS OF EVALUATING TANGIBLE ASSETS

Tangible assets are those assets which have physical form. For most dairy businesses, all items on the asset side of the balance sheet are tangible. Frequently the major classifications are these:

1. Current assets
2. Fixed assets
3. Other assets

Current assets may be converted into cash rather quickly in case of emergency or dissolution. However, not all of them may be worth book value. For example, the trade accounts receivable are seldom if ever completely collectable. Usually a portion of them will have to be "written off"; the percentage will vary according to the association's credit policies and collection programs in the past.

Fixed assets are less readily convertible into cash and are depreciated in value, on the organization's records, over a period of years. The building and equipment comprise most of these assets.

The "other assets" are small amounts of property, financial claims, prepaid expense items, or miscellaneous assets that do not fall within the other categories. Some organizations enter on the balance sheet an arbitrary value for the goodwill of their business. This is poor accounting practice; goodwill should either be omitted entirely or entered at one dollar. In the event the organization has purchased another business, and has paid for its goodwill as well as for tangible assets, the additional amount may be shown. However, it should be depreciated rapidly and not carried on the books of the purchaser for an extended period.

Frequently some special disposition is made of current assets when one organization merges with or is purchased by another. Sometimes the selling organization will keep both its accounts receivable and its accounts payable. This relieves the buyer of some collection responsibilities, and facilitates negotiation of a final price, but does increase the problems involved in liquidating the selling organization.

The "other assets" usually do not present a serious problem in a sale or merger. Their value generally is rather low and easy to determine.

The four principal ways to evaluate fixed assets are these:

1. Historical cost. Itemization of all money actually paid for the fixed assets.

2. Book value. The historical cost less the depreciation reserves which are on the books of the organization.

3. Replacement value. The current cost of new construction, new equipment, and so forth, to replace existing facilities.

4. Replacement value less depreciation. The replacement value minus an allowance for depreciation based on the age of each of the major asset items.

The last of these appears to be the most reasonable method, and the one that ordinarily should be used by cooperative managements considering purchase or sale of a milk distributing business.

A RECOMMENDED PROCEDURE FOR ESTIMATING MARKET VALUE

It is not possible to provide a formula or table of values by which management can determine precisely the market value of a milk distributing business. Nevertheless, past experience in the industry permits us to develop a rational approach to the problem. The purpose of this section of the report is to lay the foundation, or to blueprint the methods, that managements can use to establish a general concept of the market value of any given milk distributing business.

To illustrate these recommended procedures, we can again use our hypothetical or model business. Such a business -- based on an actual operation -- was referred to in earlier portions of this report. More specific information on finances and operations is needed here in order that managements may follow the necessary calculations.

The summary of the balance sheet is given in Table 2, information on dollar volumes and margins in Table 3, and information on physical volumes and kinds of products in Table 4.

Table 2. - *Summary of balance sheet of hypothetical milk distributing business, December 31, 1953*

Item	Amount
Current assets	$155,000
Fixed assets (net)	270,000
Other assets	25,000
Total assets	$450,000
Current liabilities	$135,000
Long-term liabilities	65,000
Net worth	250,000
Total liabilities and net worth	$450,000

Table 3. - *Annual sales volumes and net margins (profits or savings) of a hypothetical milk distributing business, 1949-53*

Year	Sales	Net margin	Net worth (as of Dec. 31)
1949	$1,100,000	$30,000	$180,000
1950	1,000,000	25,000	175,000
1951	1,150,000	30,000	180,000
1952	1,300,000	45,000	240,000
1953	1,350,000	67,500	250,000
5-year average	$1,180,000	$39,500	$205,000

Table 4. - *Daily average sales for a hypothetical milk distributing business, 1953*

Type of sale and kind of product	Size of unit	Total number of units
Retail:		
Milk - regular, homogenized	1/2 gal.	200
Milk - regular, homo., choc.	quart	3,700
Buttermilk	quart	150
Heavy cream	1/2 pint	50
Light and medium cream	1/2 pint	200
Cottage cheese	12 oz.	50
Butter	pound	50
Orange drink	quart	50
Eggs	dozen	50
	Total retail	4,500
Wholesale-packaged:		
Milk - regular, homogenized	1/2 gal.	500
Milk - regular, homo., choc.	quart	6,000
Milk - regular, homo., choc.	1/2 pint	2,000
Buttermilk	quart	200
Heavy cream	1/2 pint	200
Light and medium cream	pint	200
Light and medium cream	1/2 pint	1,000
Cottage cheese	12 oz.	200
Butter	pound	400
Orange drink	quart	100
Eggs	dozen	200
Wholesale-bulk:		
Milk - regular, homo., choc.	gallon	130
Buttermilk	gallon	40
Light and medium cream	quart	20
Cottage cheese	5 lbs.	110
	Total wholesale	11,300
	Grand total	15,800

APPRAISAL OF TANGIBLE ASSETS

Returning again to the balance sheet of our hypothetical milk distributing organization (Table 2), let us use it for analyzing the tangible assets of any milk distributing business.

Local conditions are likely to determine the procedure in handling current assets and current liabilities.[7] Let us assume in this case that the purchasing organization accepted all items listed on the balance sheet. Further, the loss on accounts receivable was $10,000. This would have the effect of reducing current assets to $145,000.

Replacement value of the fixed assets we will give as $550,000 and the depreciation allowance calculated on that figure as $180,000. Thus the replacement value of fixed assets, less depreciation, would be $370,000 as compared to the book value of $270,000.

If we assume the value of the "other assets" is equal to book value, we have the following situation indicated by our revised balance sheet;

Current assets------------	$145,000
Fixed assets (net)--------	370,000
Other assets--------------	25,000
Total assets---------	$540,000

Thus the total appraised value of the tangible assets would be $540,000 for our hypothetical business, rather than $450,000 as shown on its books.

In this example the value of the tangible assets of the going business would exceed the balance sheet figure. It should be emphasized that this is not always the case. Failing businesses cannot command a price permitting full payment of all creditors and all investors. The buying or selling organization -- depending upon which will control the given liabilities -- will have to find out whether creditors will settle for a given percentage of each dollar owed them.

Sometimes, whether failing or not, a business will have certain tangible assets on its books of little or no value to the purchasing organization. For example, an outmoded and unused piece of equipment may be worth no more than its salvage value. If still in usable condition, it may be worth somewhat more.

The development of replacement cost estimates is likely to be more difficult for buildings than for equipment. The equipment manufacturer can supply the exact current price for any piece of equipment but current building construction costs can only be estimated. A report recently issued by the University of Idaho should be useful to anyone developing such estimates.[8]

It is relatively easy to obtain current prices for designated pieces of equipment but it is more difficult to establish reasonable depreciation rates.

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[7] In a "distress" sale, where an organization must sell in order to avoid additional operating losses and further impairment of net worth, creditors may be persuaded to accept a designated proportion of the amounts due them. The alternative might be no sale and eventually a greater loss to creditors.

[8] Page, C. M., and Walker, S. A. Building Designs for Dairy Processing Plants. 27 pp. Idaho Agr. Expt. Sta., Bul. 297. Moscow, 1953.

No survey was made during the preparation of this report to discover customary depreciation rates used by the dairy industry. Neither was an analysis made to determine what those rates should be. It may be of interest, however, to show a general rate schedule used by several milk distributing cooperatives in the south.

Tangible asset	Annual rate of depreciation
Buildings and improvements	2%
Machinery and equipment	10%
Cases and cans	25%
Autos and trucks	25%
Furniture and fixtures	10%
Retail store equipment	10%
Land	0%

The depreciation allowance for machinery and equipment is apt to vary since the rates for individual items differ considerably. Many tools and some machines need replacement every few years, whereas some machines may be serviceable and sufficiently up-to-date to be kept in use for many years.

In establishing the depreciation rate schedule for any individual business, it is desirable to review the schedule of deductions allowed by the Internal Revenue Service. Any depreciation system should conform to the requirements of that Service to avoid complications relative to Federal income tax liability. The Internal Revenue Service publishes estimates of "useful lives" and rates of depreciation for various kinds of tangible assets. These estimates are averages and serve as guides to the determination of the correct rates for individual businesses.

APPRAISAL OF GOODWILL

Calculation of Basic Value

It was not within the scope of this study to evaluate, on the basis of historical data related to large numbers of transactions, the various methods used to measure goodwill. Because conditions in the dairy industry are far from static, it is not always easy to determine whether a price paid for goodwill was either too high from the standpoint of the buyer or too low from the standpoint of the seller.

With the information we now have, a logical approach to this problem is entirely possible. This involves the use of three formulas.

Formula One - Historical profitability

This formula is a measure of past return on investment. The principal steps are as follows:

1. Determine average net margin (profits or savings) for the past 5 years.

2. Determine average net worth (investments by owners) for the past 5 years.

3. Calculate the annual return on the five-year average net worth if 7 percent interest were realized.[9]

4. Subtract the interest amount from the average net margin figure.

5. Multiply the remainder by 3. (Thus, we assume goodwill is equal to the amount of the average net margin in a 3-year period that is in excess of the "normal" rate of return on investment.)

Using again our hypothetical business, and applying the recommended formula, we develop the following data:

1. Net margin - $39,500
2. Net worth - $205,000
3. Interest return - $14,350
4. Item 1 minus item 3 - $25,150
5. Item 4 times 3 - $75,450

Thus, based solely on past experience, we have an estimate of $75,450 as the goodwill value. Since no such estimate can be exact, it may be "rounded-off" to the nearest thousand. In this instance, the final figure will be $75,000.

Formula Two - Anticipated profitability

The second formula is concerned with future profitability as indicated by anticipated margins and investments. Whereas formula one is related to measurable events in the past, this formula represents an attempt to answer the question, "How profitable is the business likely to be in the future?" Average margins realized in recent years do not necessarily indicate the margin situation in future years. Furthermore, as an investment, the business might be less attractive to a purchaser than to the seller, particularly if the purchaser's price for tangible assets was based on an appraised value that was considerably higher than the book value.

As a partial answer to this problem, the following formula may be used:

1. Estimate the average appraisal value of the total tangible assets during the next 5 years.

2. Calculate the annual return on this appraisal value figure if 7 percent interest were realized.[10]

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[9] A 5 percent figure may be prefered for small and relatively simple milk distributing businesses. However, data for 16 large dairy corporations indicate that their average net income after taxes was equal to 11.0 percent of their average net worth in 1951 and 10.5 percent in 1952. (Source: Bur. of Agr. Econ., U. S. Dept. Agric. The Marketing and Transportation Situation. 33 pp. See p. 10. Washington, April 1953.)

[10] As in formula one, a 5 percent figure may be preferable for small and relatively simple milk distributing businesses.

3. Subtract the estimated average annual margin figure for the next 5-year period.

4. Multiply the remainder by 5.

In applying this formula to our hypothetical business, we refer to the section on "Appraisal of tangible assets" and find the estimated value of such assets is $540,000. Let us assume that this will be the average for the next 5-year period. Then, as step two, we have 7 percent of $540,000 or $37,800. For purposes of illustration, we will assume the average net margin for the next 5 years will represent 4 percent of sales. (It averaged 3.35 percent for the most recent 5-year period but was 5 percent for the last single year.) Thus if we estimate sales as averaging $1,400,000 during the next 5-year period, our average net margin will be 4 percent of that, or $56,000.

In step three, we deduct the $37,800 from the $56,000. And in step four, we multiply this remainder ($18,200) by 5, obtaining a goodwill figure of $91,000 based on estimated future profitability.

This figure is related, of course, to current operating practices and policies. If the prospective purchaser believes he can obtain a greater net margin than that probable under present conditions, this may affect the price he is willing to pay. However, such an amount -- if it exists at all -- is in addition to, rather than a part of the market value of, the going business.

If the purchaser will take possession of all assets, and the supply of current assets is inadequate for meeting the needs of the business, he should estimate the cost of using additional capital after the transfer. This cost will reduce the amount of the net margin which otherwise might be anticipated.

If formula two could always be applied to supply a comprehensive and authoritative answer, there likely would be no need for the other two formulas presented here. However, this ordinarily is not the case in milk distribution transactions. Much of the information may not be available to derive precise conclusions. Thus, formula two usually will be used in a complementary fashion rather than as the sole determinant of goodwill.

Even though the results of application of this formula appear to be valid and sufficient for determining an offer or sale price, further adjustments may be required. For example, adjustments might be made for business prospects for the next 10 or 20 years, or made for the effects of a merger on the present business of the purchaser.

Formula Three - Volume of product sales

The first two formulas are related to accounting methods for determining goodwill. The third formula is based on the volume of product sales, and is similar to procedures used by some administrative employees in the industry.

The value per point is, of course, a key figure. But it tends to vary between large and small cities, geographic regions, and kinds of business. The point values used in the following formula are useful nevertheless in establishing a basic figure for goodwill.

1. One point for each quart of milk, chocolate drink, or buttermilk, irrespective of type or size of package or bulk container. (e.g. 1 point for each 4 half-pints, and 4 points for each gallon in a Norris can).

2. Four points for each quart of heavy cream, irrespective of type or size of package or bulk container.

3. Two points for each quart of light or medium cream, irrespective of type or size of package or bulk container.

4. One point for each pound of cottage cheese, irrespective of type or size of package or bulk container.

5. One point for each pound of butter.

6. The period of point determination will be the 3 months preceding the date of purchase, unless the seasonal pattern or some special development would make that period unrepresentative.

7. The price per point will be $8 for retail sales and $4 for wholesale sales.

These prices per point should be changed if information on local transactions indicates they are too high or too low. In New York and northern New Jersey, for example, the prices likely would be considerably higher.

If the local price structure is such that certain size packages are known to be more profitable than others, it is desirable to vary point values according to kind and size of package.

No points will be given for bulk milk sold to other dealers unless this volume is substantial, profitable, and relatively stable. In the event the selling organization operates a receiving station for sale of milk to other dealers, a special approach will be needed to determine the goodwill of that operation.

No points will be allotted for contract sales to schools, hospitals, army posts, and similar outlets unless there is no effective competitor for those sales outlets.

Once again using our hypothetical business, let us apply this third formula:

1. The total number of points at retail is 4,490. Valued at $8 per point, this goodwill is worth $35,920.

2. The total number of points at wholesale is 10,420. Valued at $4 per point, this goodwill is worth $41,680.

3. The total value of the goodwill is $77,600.

Rounding the figure to the nearest thousand, the goodwill estimate based on volume of product is $78,000.

Final calculation

The concluding step in estimating the basic value for goodwill is made by averaging all final figures derived from formulas one, two, and three. If the figure derived by any one of these formulas is a minus value, it should be entered as zero in the calculation of the simple average.

For our hypothetical business we have goodwill figures of $75,000, $78,000, and $91,000. The simple average of these is $81,000 and this, therefore, is the basic goodwill value for that business.

The figures derived from these formulas are much more nearly identical than those in actual practice sometimes will be.

The figure of $81,000 may be compared with those derived from the various currently used methods previously described. (See section on "Current Methods of Evaluating Goodwill.") Based on class intervals of $20,000, the largest number (four) of those estimates were between $60,000 and $80,000. However, six estimates fell within lower size classes and 9 within higher. Moreover, the range was from zero to $292,000 and the average was $91,000. Thus the figure derived from application of the recommended procedures is comparable to some of those resulting from procedures in actual practice. The tremendous variation within the latter group prohibits a high degree of similarity with any single recommended procedure or combination of two such procedures.

The purpose in using all three of the procedures recommended here is to have some measure of (1) the past profitability of the business, (2) its probable future profitability, and (3) the physical volume of products handled. Their combined use effects a reasonable compromise between the present methods of accountants and of dairy organization managements.

Adjustments for Special Conditions

If milk distributing businesses would fit into neat little packages that could be precisely weighed or measured, the job of evaluating goodwill would end with the calculation of the basic value. Using our hypothetical illustration, we could proceed as follows:

Value of tangible assets-----	$540,000
Value of goodwill------------	81,000
Market value------------	$621,000

However, even though we have used the recommended procedures for calculating goodwill value, we can not be sure that the figure is entirely realistic. It serves merely as a starting point and is subject to considerable adjustment.

These conditions or factors which affect the final goodwill figure may be grouped under the four general headings of operating efficiency, marketing environment, human relations, and special legal privileges.

Operating efficiency

The appraisal of tangible assets provides information on the current value of buildings and equipment but many questions remain to be answered. Some of those pertaining to facilities are:

1. How will the facilities be used? (The purchasing organization must first consider how the business will be operated in the future. Perhaps the entire plant will be closed, the building sold for another use, and the equipment sold at salvage value.[11] Perhaps the plant will be used for specialized production, such as packaging milk in half-gallons only. Or perhaps the purchaser will continue to operate the business in the future much as it has been operated in the past. However, many plants that were large enough to operate successfully in the past will be too small in the future.)

2. Is the equipment arranged to permit maximum efficiency of operation?

3. How will the present arrangement of equipment affect future developments in the business?

4. Are plant labor requirements high? (Labor-saving devices and techniques will continue to become increasingly important.)

5. How soon will major pieces of equipment become obsolete?

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[11] The purchasing organization would need to estimate the effects on its existing facilities if this were contemplated. Perhaps both plant and route costs could be reduced: The former through more complete utilization of processing capacity, and the latter through shorter average travel distances for full loads. Adjustments such as this might technically be called modifications of the appraisal of tangible assets. It is considerably more simple, and as a result more effective, to consider them here.

6. Does the plant have "eye-appeal" for consumers? (This characteristic has not influenced sales as much in the past as it will in the future.)

7. Is the plant well located with respect to future production needs? (Sufficient land area, adequate utility and sewage disposal service, proper drainage, and so forth.)

8. Will the plant and its products be able to meet increasingly strict quality standards? (Sometimes major increases in investment will soon arise as a result of changes in sanitary regulations.)

9. Can the plant supply the products that consumers now demand or soon will demand? (In a small plant, unit costs are excessive if milk is packaged in both paper and glass, and in regular containers and multi-quart containers. Because of this, many businesses, based on small plant operations, have had to relinquish processing and restrict themselves to distributing products packaged in other plants.)

10. If the plant is large enough to operate efficiently, will it have sufficient volume to use its facilities effectively? (Adequate volume is always needed to keep unit costs reasonably low. Moreover, no plant can operate efficiently when using only a small percentage of its capacity in an 8-hour day. Then, too, high seasonal variations in milk receipts may result in over-capacity operations at one time of year and in under-capacity at another season.)

Further questions relating to milk receipts and distribution point up qualifications affecting the values of intangible assets.

1. Will present producers continue to ship milk to the plant? (Additional supply is often the prime reason for the purchase or merger, although sometimes an organization will buy a business merely to obtain additional sales outlets or processing facilities.)

2. What is the sanitary quality of the milk received? (High quality products cannot be made from low quality milk. Furthermore, if another distributor enters the market and makes high quality milk available for the first time locally, sales of low quality milk products may drop. Thus, a business must be considerably discounted if it is built on Grade B milk and has recently met -- or soon will meet -- competition from distributors of Grade A products.)

3. What is the average butterfat content of the milk received? (Unless the business can obtain price premiums for high butterfat content in the bottle it should prefer to receive milk that comes rather close to the average test in the bottle. Additional butterfat often brings a surplus disposal problem.)

4. What proportion of the business is at wholesale and what at retail? What appears to be the local trend in this respect?

5. What sorts of sales outlets are available with regard to size and stability? (Large volume stops can be served at least cost. Against this, however, must be weighed the effect of discounts and the stability of each account.)

6. To what extent will current sales outlets stay with the business? (An estimation of the number and volume of the sales outlets still existing 60 days after the business has changed hands may change the basic value for goodwill.)

7. In considering operating costs of a small noncooperative business, have reasonable "salary" expenses been calculated for the owner or partners? (If such an expense has not been deducted, it should be subtracted from the net profit figure on the operating statement in order to obtain the net profit actually realized.)

8. What savings will result from the merger of the businesses? (Will the merger reduce administrative costs, lower prices on supplies due to quantity discounts, eliminate duplication of pick-up routes and sales routes, and reduce costs for field supervision?)

9. Is it cheaper to buy sales routes rather than build new ones? (This question is particularly appropriate when one organization contemplates purchase of only part of a business. And it is always pertinent to an organization seeking new sales outlets.)

10. Will the buyer have the right to continue operating the business at the same place?

11. Will the seller agree to refrain from engaging in milk distribution in the area for some specified period of time of reasonable length? If not, what is he likely to do?

12. Will the necessary records of the business -- especially the list of names and addresses of customers -- become the property of the buyer?

13. If the business is operated on leased property or with rented equipment, for how long will these leases be effective if a transfer is made?

14. Will the location affect the success or failure of this business?

15. What has been the trend in annual margins or profits? (The average for a several-year period may be misleading. It will be too high if there is a distinct downward trend, and too low if the trend is upward.)

16. What is the present relationship of Federal income tax liability to net margin or net profit? Would this be changed? (If the selling organization did not use a mandatory provision to return all savings

to producer-patrons, while the purchaser intended to use it, the amount of Federal income taxes paid on a given amount of gross margin or profit would be reduced. As a result, the amount of net profits or net savings would be increased.)

17. How profitable is the business likely to be in the future? (The answer to this broad general question is affected by the answers to many other questions. Determining the answer to it is, of course, the basic objective of our recommended formula three but it is presented here in order that it may be considered separately.)

A common way to measure the financial stability and achievement of a milk distributing business is to compare balance sheet items with one another. The desired ratios between such items vary considerably between businesses and even regions.

Ratios are merely one of several guides for analyzing the financial condition of a particular business. But if we are to evaluate fully the status and prospects for an organization, we need to know about such things as recent construction programs aimed for the future, the historical record of operating savings or profits, and the quality of the direction given to the business by management.

1. Current Assets to Current Liabilities: The relationship of current assets to current liabilities is a measure of the current solvency of a business. Current assets are needed for purposes other than payment of debts and should, therefore, exceed current liabilities. Otherwise, the concern may not be able to meet current obligations, such as the payroll. The suggested minimum standard for judging a successful operation is 1.6 to 1. (This means there would be 1.6 dollars in current assets for each 1 dollar in current liabilities.)

2. Working Capital to Long-term Liabilities: When we subtract current liabilities from current assets the resulting figure is called "working capital." As the term implies, this amount is used to meet various current needs. The minimum standard for judging successful operation by use of this ratio is more flexible than the others. A ratio of 1.0 to 1.0 is satisfactory, but a ratio of 1.5 to 1.0 is high enough to indicate that interest and amortization of long-term debts are not apt to become so large that there will not be enough capital to meet the current obligations.

3. Net Fixed Assets to Total Assets: The suggested maximum standard for judging successful operation is .5 to 1.0. This is the one ratio that should be kept below the standard if possible. A high ratio indicates either a shortage of working capital (to meet current obligations) or slow depreciation rates in "writing off" fixed assets.

4. Net Worth to Net Fixed Assets: This ratio with 1.0 to 1.0 as a minimum standard indicates whether owners are supplying reasonable

amounts of capital needed for facilities, and whether fixed charges are apt to become burdensome in the event of a price decline. It also indicates whether the business would be able to pay its creditors if it were dissolved; if the business has that ability, it may borrow money at reasonable rates whenever needed.

5. Net Worth to Total Liabilities: This ratio provides a comparison of investment capital to current and long-term obligations to creditors. The stability of an organization largely depends upon whether the amount of investment capital is substantially greater. Suggested minimum standard for judging successful operation is 2.0 to 1.0.

Several other financial ratios discussed below are often useful tools when a business is evaluated.

1. Trade Accounts Receivable to Average Weekly Sales: Collecting trade accounts is a frequent problem in the milk distributing business. Many distributing organizations have encountered financial troubles because of overly generous credit policies. If a cooperative, purchasing another business, is to assume the trade accounts receivable, it should attempt to evaluate their collectability. This may be done in part by classifying them by age. Accounts outstanding for more than 90 days are usually worth far less than more nearly current accounts. This age analysis may be supplemented by measuring the relative size of the total amount outstanding. The suggested minimum standard for judging successful operation is 2.5 to 1.0 when gross trade accounts receivable are compared to weekly sales, and 2.0 to 1.0 when net trade accounts receivable are compared to weekly sales.

2. Net Margin to Net Sales: This ratio shows a cooperative's operating savings as a proportion of total receipts. In a non-cooperative business, this is the percentage of profit on each sales dollar. The suggested minimum standard for judging the successful operation of a business with approximately 50 percent of its sales at wholesale and 50 percent at retail is .05 to 1.0. This standard ratio should be increased as the proportion of wholesale sales increases, or decreased as the proportion of retail sales increases.

3. Net Sales to Net Fixed Assets: This measures efficient use of assets and financial strength in carrying "overhead" expenses. The suggested minimum standard for judging successful operation is 4.5 to 1.

Frequently the purchaser cannot study the entire audit report for a business up for sale. However, an analysis of the complete operating statement can be very revealing. The techniques involved are too varied to discuss here and, furthermore, are a subject on which managements of prospective purchasing organizations are likely to have rather definite opinions.

In general, however, it is desirable to analyze costs on a unit basis. How much do plant labor, plant supplies, plant insurance, truck maintenance, and other important items cost per quart or per hundred pounds of milk handled? Such cost figures can be compared with those for similar operations.

In considering volume, we should note the quantities of milk solids received in purchased dairy products, and in inter-plant transfers of bulk fluid milk, as well as in milk received from local producer-patrons.

In addition to analyzing current costs, we should consider what the probable future costs will be. To estimate future costs more precisely than is now possible would require further research.

Marketing environment

A business may have efficient facilities, adequate utilities, good management, and other attributes, but still may not be successful. Another business, comparable in all respects except marketing environment, can be outstandingly successful. It is not enough to observe the operations of the enterprise as a business unit; it must be judged in relation to the marketing environment in which it operates.

Some of the questions that may be asked by a prospective purchaser are:

1. What is the competitive situation? Are competitors both aggressive and progressive? Do they have capable managements? Are they likely to hold or to obtain the most lucrative sales outlets? Are there personal or corporate ties that would make it difficult for the cooperative to compete effectively for such sales outlets?

2. What influences affect local demand for this organization's products? What has happened and is likely to happen in the future with respect to: the number of consumers; the location shifts of consumers; consumers' disposable incomes; consumers' preferences and buying habits; distribution of consumers by age groups; composition of consumers on the basis of national origin and food habits; numbers, kinds, and sizes of local industries and other enterprises affecting total local employment?

3. To what extent do opportunities exist for increasing per capita consumption of fluid milk products? (Can it be increased through advertising and promotion geared to local conditions, and merchandising techniques such as quantity discounts?)

4. How wide (or narrow) are the margins of other distributors in the market? How prevalent are established discounts? Uneconomic price cutting? (These directly affect opportunities for realizing operating savings.)

5. How high are prices for milk? (With relatively high prices and substantial margins, the value of route business probably would be high per point, per unit, or per stop.)

6. How is the plant situated with respect to present and prospective supplies of locally produced milk? Present and prospective transportation avenues for such milk? (Shifts in these may result in high costs for obtaining milk that are prohibitive in comparison with costs of local competitors.)

7. What proportion of this organization's milk is used in fluid form? What in other products? And how does this milk utilization pattern compare with those of its competitors? (If the organization can convert only a small portion of its milk to high-return products, it may be at a competitive disadvantage in two ways: it may have difficulty in paying competitive prices for milk received, and difficulty in selling finished products at as low prices as other local distributors.)

8. Would purchase of the business provide additional marketing opportunities? (For example, the purchaser might then be able to participate in a market-wide pool resulting in higher average prices each year to its producers. In the case of a dairy manufacturing organization, purchase of the business might provide a means of entry into milk distribution and perhaps a chance to increase returns to producer-patrons. In addition to the chance to use some of its own qualified milk in high-return bottled products, the purchasing organization might add sales outlets for distribution of its manufactured dairy products.)

9. To what extent do the supply and sales areas of this local market overlap with those of other markets? What is this situation likely to be in 5 years? - 10 years?

10. How does the business offered for sale rank in the market? Is it one of the largest, or has it been dominated by others? Is there an opportunity for improving its position?

11. Will it be difficult to begin or to further expand in milk distribution in this market? (A milk distributing organization sometimes will purchase a competitor's business at a price in excess of its present market value on the assumption that this business will expand in the future. By purchasing it now, the purchasing organization can itself enjoy the benefits of that future expansion.)

Human relations

Every milk distributing business has contacts with producers, employees, customers, government and the general public. It is only in recent years that the dairy industry has begun to appreciate fully their importance. Many of the questions and problems discussed previously have involved such relations, but there are human factors as well as physical factors to consider.

Among the additional questions that may be asked are these:

1. Are top administrative and other key employees capable, and will they stay with the business? (At least a few of them -- perhaps all -- will be needed after a merger or transfer of business occurs.)

2. Have rank-and-file employees been paid adequate wages? Have they been given non-monetary compensation through well-developed employee relations programs, which not only benefit the employees but stimulate efficient plant and route operations? (Efficiency is not just a matter of equipment but also of manpower. Sound employee programs usually provide efficient employees.)

3. Are producers satisfied, and will they stay with the business after it changes hands? (Assuming the purchaser would want to retain present milk supplies.)

4. Will a sufficient number of customers continue to patronize the business?

5. Is the attitude of the general public favorable, unfavorable, or disinterested toward the business? (This would affect the measurement of potential business expansion.)

6. Is the selling organization in difficulty with any regulatory agency of government? (Has the business violated local, State, or Federal laws or regulations? Would any changes in sanitary or other regulations, now pending, cause present operating practices to be automatically in violation?)

Special legal privileges

Certain legal privileges granted to a business organization may have market value. A few questions will serve to illustrate the nature of these privileges.

1. If a trademark is used on the products, does that have special value? (Sometimes the company name or trademark has been established for many years and has considerable appeal in the areas in which the company's products have been sold. In other instances, consumers may be little affected by a change in name or trademark.)

2. Will the buyer have the right to use that trademark?

3. Does the organization own patents that have market value? Will the patents be transferred?

4. Does the business have franchises or licenses of particular value? (If such franchises or licenses are transferable with the business, they may be quite valuable. This is especially true if the purchasing organization should be permitted to distribute milk in a market in which it had not operated previously.)

The ordinary calculation of goodwill will include the values of the above itemized intangible assets. Occasionally, however, such an item may be of unusual importance. Then an adjustment is made in the goodwill figure in order to include the value of what is technically another intangible asset.

After all the many factors have been considered, and the enumerated questions answered, an adjusted figure for goodwill is developed. This leaves only a final step to obtain the estimate of market value.

ESTIMATING MARKET VALUE

The final market value figure results from the addition of adjusted values calculated for tangible and intangible assets. This is the figure upon which all bargaining or negotiation is based -- whether the transaction is a merger or an outright purchase of all or part of a business.

To illustrate this final calculation, we will use once again the data for the hypothetical milk distributing business.

Let us assume that an analysis of the situation showed that the net effect of "adjustments for special conditions" caused a $9,000 increase over the "basic value" for goodwill. The final calculation of market value then would be:

Value of tangible assets-------	$540,000
Value of goodwill--------------	90,000
Market value--------------	$630,000

Thus the market value of the hypothetical business would be $630,000. This would, of course, be the value of the entire business. If not all tangible assets were bought, the purchase price ordinarily would be lowered by an amount equal to the market value of the assets not involved. However, let us remember that the total value of such a "going" business exceeds the sum of the values of its tangible assets or of its basic parts if those were to be sold separately.

The total assets figure on the balance sheet was only $450,000 and therefore was not an accurate indication of the market value of this business. For a successful business with satisfactory prospects for future operations, and with all fixed assets actually being used in the business, the market value always exceeds the total assets figure. For an unsuccessful business, however, the market value may be less than total assets. The lowest conceivable market value figure would be the salvage value of tangible assets with no allowance for goodwill.

The calculation of market value does not end the problems involved in the purchase of a dairy business. For example, a number of associated problems arise which are not directly involved in the subject of this report. And although they play no part in estimating the market value of a milk distributing business, we will briefly mention below the major problems.

One of the key problems in milk distribution pertains to developing capable management. In adding another business, the management of the purchasing organization must anticipate an increase in administrative duties and responsibilities. Adjustments will have to be made and possibly new administrative employees hired. A program to develop capable management will be necessary.

The problem of raising capital to finance the purchase is often difficult since additional borrowed capital usually is required. To obtain it management may: borrow from commercial sources; reduce the cooperative's reserves and surpluses; increase producer and non-producer investments by selling additional stock or other certificates or by increasing current retains from advance payments. Sometimes anticipated savings in operations play a part in the financing program, but this seldom is a sound procedure.

There are also many legal problems which require professional assistance. Changes may be necessary in the cooperative's organization forms, and many legal complications arise from the transfer of ownership. Furthermore, it sometimes appears desirable to establish a subsidiary corporation.

Under some conditions of purchase or sale it is possible to save several thousand dollars by itemizing principal assets rather than adding them to obtain a total amount for the entire business. Tax liabilities vary according to the tax classification of the principal kinds of assets. Management needs to know what items are chargeable to cost of sales, which can be depreciated, and which can neither be charged to direct cost of sales nor depreciated. For example, the pressure on a buyer to purchase cheaply is greater with respect to land and goodwill than building or equipment because the latter can be depreciated in the future. Similarly, the seller should seek a maximum figure on equipment since any profit can be handled as a capital gain. The interests of buyer and seller do not always conflict.

Since tax rates are lower on capital gains than on income a qualified tax consultant should be consulted to determine the optimum bargaining procedure to either buy or sell with the smallest possible tax liabilities.

Many milk distributing organizations manufacture ice cream. The production and distribution of substantial quantities of this product calls for special adjustments in the market valuation procedure. As the business operation becomes more complex, increased dependence upon the profitability formula for goodwill is necessary.

If a merger of cooperatives is contemplated, the major obstacles may be human rather than economic or physical. The "vested interests" and loyalties of individuals have blocked many a merger that was economically desirable.

No matter how simple or complex the business, the final price depends on bargaining between buyer and seller. Obviously, the buyer will try to purchase the plant for less than his estimate of market value, whereas the seller will try to sell at a price higher than his estimate of market value. Neither is likely to know the other's estimate.

A buyer is not apt to have all the pertinent information that has been described in previous portions of this report. In fact, it is not now common practice even to list such items or to record on paper most of the information on which management bases its conclusions. This practice has often been sufficient in the past, but as the industry becomes more complex, the need for systematic surveys becomes greater and more readily apparent.

The informational needs of the prospective seller are much the same as those of the prospective buyer. To increase its bargaining power, management of the selling organization needs to anticipate how the buyer will estimate the effect the additional business will have on his existing business. The buyer need not, of course, be previously engaged in milk distribution or even be participating in the dairy industry. Usually, however, the prospective buyer is a dairy organization.

While not directly concerned with the details of the financing plans of the buyer, management of the seller must be assured that the buyer will be able to live up to the terms of the sales agreement. The seller must know the credit rating and soundness of financial structure of the buyer.

While there is no substitute for sound judgment, adequate information is essential for wise decisions by any management contemplating sale or purchase of a milk distributing business.